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EXAMINER

REICHLE, KARIN M

ART UNIT	PAPER NUMBER
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3761

DATE MAILED: 03/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/024.544

Applicant(s)

NAKASHITA, MASASHI

Examiner

Karin M. Reichle

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 December 2005.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15, 22-24, 26, 27 and 29-32 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 4-15, 22-24, 26, 27 and 29-32 is/are rejected.
- 7) ☒ Claim(s) 2 and 3 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

1. Claims 8-11, 22 and 31-32 are objected to because of the following informalities: The language added to claim 8 is redundant, i.e. the language only requires the area be within the periphery of the first sub-panel, i.e. was already claimed, not that the entire surface of the panel encompassed by the periphery is flat. This also applies to similar language in claims 22 and 31. Appropriate correction is required.

Claim Rejections - 35 USC § 112

2. Claims 12-14, 26 and 32 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In regard to claims 12 and 32, a positive structural antecedent basis for “regions where said protuberant portions contact said second fibrous assembly sub panel” should be set forth. In claim 26, the last four lines appear to be inconsistent, i.e. if the portion is substantially flat, how can it include protuberances and wall portions surrounding areas thereof and if the areas are unconnected, how are they separated by a minimum of only at least one protuberance or one wall portion?

Claim Language Interpretation

3. It is noted that the claim language “ a substantially flat portion...subpanel” of claim 1 does not specify the specifics of such portion with regard to lower side of the overall subpanel, e.g. thickness, length, width, i.e. can read on a portion of the lower side surface thereof.

“Progressive” as defined by the dictionary means “moving forward, advancing, proceeding in steps, continuing steadily by increments”. Therefore, the last subsection of claim 1, i.e. the terminology “progressively”, especially in light of the new Figure 6 which shows one strata of a subpanel of one density and another strata of the subpanel having another density, i.e. not an evenly progressing density from surface to surface, is interpreted as requiring some portion of the first subpanel having an increase in its density toward the second subpanel but does not require the subpanel within its terminal edges to evenly increase in density from its top surface to its bottom surface. Claim 5 as now amended is interpreted to require some SAP but no more than 50 wt%. Claims 8 and 22, as now amended, and now claim 31 are interpreted require only an entire flat area of the first subpanel be within its periphery which was previously required not that the entire surface of the panel encompassed by the periphery which faces the topsheet being generally flat. Claim 12 is considered to require the regions of the protuberant portions directly touch the second sub-panel and be higher in fiber density at some point than the entire upper surface of the base portion. The latter also applies to similar language in claim 32. Claim 14 is now interpreted as requiring a density at some point of the wall portions being higher than the entire upper surface of the base portion. Claim 24 is interpreted to require fiber density at some point of the protuberant portions be lower than the density of the entire second sub-panel. Claim 26, due to the lack of clarity discussed supra, is interpreted to require unconnected areas separated from each other by protuberant portions and wall portions. The article of new claim 29

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is not required to include only a topsheet, a backsheet and a panel of only two sub-panels, i.e. there can be more than one absorbent panel. It is also noted that the claim terminology "bear" does not require direct contact.

Claim Rejections - 35 USC § 103

4. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

5. Claims 1, 4-15, 22-24, 27 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Harwood '986 in view of Hsieh et al '155 and Chen et al '377.

With regard to claim 6, see Claim Language Interpretation section supra, and Harwood at Figures, col. 1, lines 50-62, col. 2, line 12-col. 3, line 54, col. 3, lines 68-74, i.e. the topsheet is 11, the panel is at least 16 and 18, the first subpanel is 16, the second subpanel is at least 18, and the protuberances are at least 32. The Harwood device therefore includes all the claimed structure except for 1) a backsheet and 2) the density of the second subpanel being higher than that of the first subpanel. However, with regard to 1) to employ a backsheet as taught by Hsieh on the Harwood sanitary napkin would be obvious to one of ordinary skill in the art in view of the recognition that such is typically employed on a sanitary napkin and the desire of Harwood to use known components, see, e.g., col. 1, lines 50-62 of Harwood and col. 5, lines 11-14 of Hsieh et al. With regard to 2), see col. 2, lines 19-36 of Harwood, i.e. the desire to promote migration from the first panel 16 to the second panel 18. It is noted that it is not claimed that the density of the second subpanel is uniform or is only higher than that of the first subpanel. See also, e.g., Figures 2 or 13, col. 27, lines 10-11, col. 27, line 54-col. 28, line 3 and col. 38, lines 27-46 of

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Chen et al, i.e. second subpanel in contact with protrusions of first subpanel has higher density to promote migration of fluids therebetween. To employ a second subpanel having a higher density than the first subpanel as taught by Chen et al on the Harwood device would be obvious to one of ordinary skill in the art in view of the recognition that such would promote migration of fluids therebetween and the desire of Harwood for such migration. See also Response to arguments section *infra*.

With regard to claim 7, the wall portions are 40, see Figures. Applicants further claim specific densities of the second subpanel in combination with those of the protuberant portions and wall portions. Note col. 38, lines 32 and 33 of Chen et al, i.e. the density of the first subpanel would be less than or about 0.2 g/cc. The prior art combination teaches a compression resistant first subpanel in combination with a second subpanel having a density higher than that of the first subpanel which first subpanel includes protrusions and wall portions to promote migration of body fluid in the z-direction rather than the lateral direction. Since the general conditions of claim 7 are disclosed in the prior art it is not inventive to discover the optimum or workable ranges, i.e. the specific densities claimed in claim 7, by routine experimentation, see *In re Aller et al*, 105 USPQ 233.

With regard to claim 8, see discussion of claim 8 in paragraphs 1 and 3 *supra*, the surface is that shown in Figure 3 adjacent the topsheet 11. As shown in the Figures such surface is flat throughout an entire area thereof, e.g. outside 30 and/or between 32. It is noted that the entire surface of the panel encompassed by the periphery is still not claimed as being flat.

With regard to claim 9, the base portion which is the structure defining the surface discussed in claim 8 has an upper surface, i.e. the top sheet, defining the flat surface of claim 8,

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e.g. portions of the top sheet of creped tissue, see col. 2, lines 12-13 and col. 3, lines 68-72 of Harwood, and a lower surface from which the protuberances depend. The fiber density of the protuberant portions is higher than that of the base portion, see col. 2, line 26-col. 3, line 33, i.e. at the very least a portion of the protuberant portions, e.g. adjacent 34, is higher than that of at least a portion of the base portion, e.g. the top layer of the portion 42. The fiber density of the protuberant portions is lower than that of the second panel, see discussion of claim 7 supra. It is noted that the claim does not require the density of the entire protuberant portions be higher than that of the base portion, or that of the entire base portion, or any specific portion of the protuberant portions being higher than that of the base portion. It is also noted that the claim does not require the protuberances extend beyond or lower than the entire remainder of the lower surface.

In regard to claim 10, the wall portions are 40. The fiber density of the wall portions is higher than that of the base portion, see col. 2, line 26-col. 3, line 33, i.e. at the very least a portion of the wall is higher than that of at the very least a portion of the base portion, e.g. the top layer of 42. The fiber density of the protuberant portions is lower than that of the second panel, see discussion of claim 7 supra. It is noted that the claim does not require the density of the entire wall portions be higher than that of the base portion or that of the entire base portion, or any specific portion wall portions being higher than that of the base portion. The claim also does not require any specific density relationship between the protuberant portions and the wall portions, i.e. can be the same.

In regard to claim 11, the areas are central portions of the area 30, e.g. in Figure 3, the opposite surface of portions of the top layer between four adjacent structures 32, i.e. those areas

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are surrounded by those protuberances and protuberances/wall portions outside such innermost protrusions, at least one protuberant portion or wall portion as claimed. It is noted that the areas are not claimed of a certain size or shape nor that each area is unconnected. It is further noted that in light of the specification, the terminology “completely surrounded” is interpreted to mean completely surrounded in the x-y plane not the z plane.

In regard to claims 12-14, see discussion of claims 9, 7, and 10 supra and claim 1, the discussion of 3) infra.

In regard to claim 15, for the purposes of this claim, the protuberant portions are 32 and 42.

With regard to claim 1, see Claim Language Interpretation section supra, and Harwood at Figures, col. 1, lines 50-62, col. 2, line 12-col. 3, line 54, col. 3, lines 68-74, i.e. the topsheet is 11, the panel is at least 16 and 18, the first subpanel is 16, the second subpanel is at least 18, the first subpanel substantially flat portion are portion(s) 40 and the protuberances are 32, see Figure 4, the fiber density of the first subpanel increases towards the second subpanel, see col. 2, line 26-col. 3, line 33, especially col. 3, lines 26-33, col. 3, lines 1-10 and col. 2, lines 26-28 and 42-47 (the density of the areas 34 is higher than that of the surface of 40 or 42 adjacent the topsheet 16). The Harwood device therefore clearly includes all the claimed except for 1) a backsheet and compressive restoring elasticity as claimed in claim 1, 2) the density of the second sub panel being higher than that of the first subpanel as claimed in claim 1 and 3) the fiber density of the first subpanel having a fiber density increasing progressively toward the second subpanel. However, with regard to 1), i.e. the backsheet, and 2), see discussion of claim 6, supra. With regard to 1), i.e. the compressive restoring elasticity, also see Hsieh et al at Figures, col. 3, lines

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31-60, col. 3, line 61-col. 4, line 5, col. 5, lines 8-14, col. 7, lines 16-20, i.e. sanitary napkin with two subpanels, one subpanel having embossments, which one subpanel can be of hydrophilic materials, e.g. cellulose or thermoplastic synthetic resin fiber, and be any thickness such that the panel is resistant to wet collapse when simultaneously subjected to compressive forces and fluid, i.e. has a "compressive restoring elasticity" (see also paragraph bridging pages 10-11 of the instant application). To make the first subpanel of any number of cellulosic sheets as taught by Harwood a first subpanel of a material, e.g. cellulose, hydrophilic thermoplastic synthetic resin fiber, and a thickness such that the panel is resistant to wet collapse instead would be obvious to one of ordinary skill in the art in view of the interchangeability as taught by Hsieh et al. With regard to 3), it is the Examiner's first position that the fiber density of Harwood increases progressively toward the second subpanel, see Claim Language Interpretation section and portions of Harwood supra, i.e. the density of the areas 34 is higher than that of the surface of 40 or 42 adjacent the topsheet 16 and/or at least the portion of 40 facing the second subpanel has a lower fiber density than the portion of 34 contacting the second subpanel. In any case, the Examiner's second position, Harwood teaches that it is well known that fluid migrates more rapidly through denser areas, that fluid is intended to migrate downwardly in the portions 34 and that the depressions are created by compacting the fibers in the direction of the second subpanel, i.e. the number of fibers per unit area at the bottom of 34 is greatest. Therefore, to make the fiber density of the first subpanel increase progressively toward the second subpanel, if not already, on the Hargrove device would be obvious to one of ordinary skill in the art in view of the recognition that such density gradient is known to promote the migration of fluid in a certain direction, i.e. downwardly, and the desire of Harwood to migrate fluids downwardly.

With regard to claim 4, it is now claimed that the first sub-panel comprises hydrophilic synthetic resin fiber and cellulosic fiber of specific wt. percentages. While Harwood teaches a first densified contoured subpanel of multilayered fluid absorbent material such does not teach a combination of fibers as claimed. However see col. 28, line 16-col. 30, line 50 of Chen et al, i.e. teaches a densified contoured subpanel of multilayered fluid absorbent material including a combination of hydrophilic synthetic resin, i.e. melt blown, fiber, 70% or less by wt, and cellulosic fiber, the remainder of the mixture. To substitute the multilayer absorbing material as taught by Chen, i.e. a material of fiber composition as claimed, for the multilayer absorbing material of the Harwood sanitary napkin would be obvious, see In re Siebentritt, 54 CCPA 1083(two equivalents are interchangeable for their desired function, express suggestion of desirability of substitution not needed to render such substitution obvious, i.e. one densifiable, contourable multilayer fluid absorbent material for another).

With regard to claim 5, Applicant now claims the second subpanel including a superabsorbent polymer of fibrous or granular form up to 50 wt%. However, see Harwood at col. 2, lines 19-25, i.e. can be any fluid absorbent material. Also see Hsieh at col. 6, lines 1-23, i.e. combination of cellulosic materials and SAP, i.e. less than 100%, and also thereby '492 at col. 3, lines 10-42 and col.4, lines 33-35, e.g. SAP coated rayon fibers, i.e. fibrous SAP which forms at most 25% of core, and '419 at col. 2, lines 55-57 and col. 4, lines 48-55, i.e. SAP of granular or fibrous form incorporated in fibrous core. To employ the fluid absorbent core as taught by Hsieh, i.e. a second subpanel comprising at least one of fibrous or granular SAP of no more than 50 wt%, on the Harwood sanitary napkin would be obvious, see In re Siebentritt, 54

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CCPA 1083(two equivalents are interchangeable for their desired function, express suggestion of desirability of substitution not needed to render such substitution obvious).

In regard to claim 22, see discussion of claim 8 supra.

In regard to claim 23, as discussed supra, since wall portions are not required, the flat portion could be considered 40.

In regard to claim 24, see, e.g., discussion of claim 1 supra.

In regard to claim 27, see discussion of claim 15 supra and Claim Language Interpretation section supra.

In regard to claim 29, see Claim Language Interpretation section supra with regard to the scope of claim 29 and the discussion of claim 1, i.e. Harwood includes a liquid absorbent panel consisting of two subpanels which is all the claim requires.

6. Claims 30-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Burgeni '304 in view of Chatterjee '585.

Claims 30-31: see Figure 15 and the paragraph bridging cols. 6-7, and the Claim Language Interpretation section supra, i.e. the topsheet is at the upper portion of at least one of 71 and 72, the panel is 67 and another absorbent body, e.g., 62, the first subpanel is 67, the second subpanel is, e.g., 62, the protuberances are at least adjacent 69 and the upper surface of 67 includes flat regions located above the protuberances which are free of depression. The Harwood device therefore includes all the claimed structure except for a backsheet. It is noted that Burgeni also teaches a water repellant, not impervious, tissue layer between the subpanels to control flow as well as the desire to use the absorbent structures in various absorptive articles. See however Chatterjee at Figures 1-2 and col. 3, lines 7-37, i.e. sanitary napkin of two

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absorbent subpanels separated by a liquid flow control tissue layer interchangeable with such a napkin with a liquid impervious barrier or backsheet as claimed or with such a napkin with a liquid impervious barrier or backsheet but no flow control tissue. Therefore to employ make the backsheet-less napkin of Burgeni a napkin with a napkin with a backsheet as claimed or such but with no flow control tissue instead would be obvious to one of ordinary skill in the art in view of the interchangeability as taught by Chatterjee.

Claim 32: As best seen in Figure 15, the protuberant portions of the prior art combination, see discussion of claims 30-31, would necessarily and inevitably contact a second sub-panel when the flow control tissue is dispensed with and have a higher fiber density at some point than any point on the upper surface of the base portion. See also, col. 7, lines 12-16 and Figures, e.g. Figure 3, of Burgeni, i.e. the second sub-panel can have a density higher than that of the protuberant portions, i.e. the layer 17 has a higher density at some point than some point of protuberant portions, e.g. lateralmost portions of 68 in Figure 15 depending from the surface of 68 adjacent the upper surface of 56'. It is noted that the claims do not require the second sub-panel to have a density higher than all the protuberant portions, or the portions which contact, etc.

Allowable Subject Matter

7. Claims 2-3 and 26 distinguish over the prior art references, alone or in any combination, because they do not teach a flat portion on the lower side of the first sub-panel spaced from a second sub-panel by a first dimension and a plurality of protuberant portions extending therefrom to bear against the sub-panel and wall portions joining such protuberant

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portions and also spaced from the second subpanel but by a second dimension smaller than the first and such structure in combination with all the other structure claimed in claims 1-2 alone or in combination with that of claims 3 or 26.

Response to Arguments

8. Applicant's remarks have been considered but are either deemed moot in that the issue(s) discussed has/have not been repeated or are deemed not persuasive for the reasons set forth supra, e.g. such are narrower than the prior art rejection, the teachings of Harwood and the claim language. For example, contrary to Applicant's remarks the definition of "progressive" has not been limited to evenly progressing, see Claim Language Interpretation section supra and the last Office action. For another example, Harwood, as pointed out in the last Office action, also includes a substantially flat portion 40 on the lower surface. It is also noted that Applicant's remarks on pages 11-13 with respect to claims 1-5, 22-24 and 26-29 argue Harwood alone whereas the prior art rejection is based on a combination of references. It is also noted claim 30 does not claim the panel consisting of two sub-panels as argued on page 13. With regard to the arguments with respect to claims 6-15 on pages 13-14 it appears that Applicant is arguing that the Harwood density arrangement and that of Chen are functional equivalents and thus there is no advantage to combine. However, regardless of whether such is the case, note *In re Siebentritt* cited supra, i.e. the motivation to combine two references is not limited to providing advantage but may also be substitution of one functional equivalent for another which equivalency Applicant seems to be conceding to.

Conclusion

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.


Any new grounds of rejection were necessitated by the amendments to the claims of 12-05 and new claims 30-32.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karin M. Reichle whose telephone number is (571) 272-4936. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tanya Zalukaeva can be reached on (571) 272-1115. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Karin M. Reichle
Primary Examiner
Art Unit 3761

KMR
March 2, 2006